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Cell Lines

ATCC Number:	**CCL-240** Order this item	**Price:**	**$179.00**
Designation:	HL-60	**Depositors:**	RC Gallo
Biosafety Level:	1	**Shipped:**	frozen
Medium & Serum:	See Propagation	**Growth Properties:**	suspension
Organism:	*Homo sapiens* (human)	**Morphology:**	myeloblastic PHOTO

Tissue: peripheral blood; promyeloblast; promyeloblast; acute promyelocytic leukemia

Cellular Products: tumor necrosis factor (TNF), also known as tumor necrosis factor alpha (TNF-alpha, TNF alpha), after stimulation with phorbol myristic acid [23403]

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Related Cell Culture Products

Comments:	HL-60 is a promyelocytic cell line derived by S.J. Collins, et al. Peripheral blood leukocytes were obtained by leukopheresis from a 36-year-old Caucasian female with acute promyelocytic leukemia. [22902] HL-60 cells spontaneously differentiate and differentiation can be stimulated by butyrate, hypoxanthine, phorbol myristic acid (PMA, TPA), dimethylsulfoxide (DMSO, 1% to 1.5%), actinomycin D, and retinoic acid. [1229] The cells exhibit phagocytic activity and responsiveness to chemotactic stimuli. [1050] The line is positive for myc oncogene expression.
Receptors:	complement; Fc [1050]
Tumorigenic:	Yes, form colonies in semi-solid media and produce subcutaneous myeloid tumors in nude mice. [1050]

Oncogene:	myc +
Reverse Transcript:	negative
DNA Profile (STR):	Amelogenin: X CSF1PO: 13,14 D13S317: 8,11 D16S539: 11 D5S818: 12 D7S820: 11,12 TH01: 7,8 TPOX: 8,11 vWA: 16
Cytogenetic Analysis:	The stemline chromosome number is pseudodiploid with the 2S component occurring at 6.2%. Five markers (M2 through M6) were common to most S metaphases. DM's, which varied in numbers per cell, occurred in all metaphases karyotyped. HSR chromosomes were not detected.
Isoenzymes:	AK-1, 1; ES-D, 1; G6PD, B; GLO-I, 1; Me-2, 1; PGM1, 1; PGM3, 1
Age:	36 years
Gender:	female
Ethnicity:	Caucasian
Passage submitted to the ATCC:	8
Propagation:	**ATCC complete growth medium:** Iscove's modified Dulbecco's medium with 4 mM L-glutamine adjusted to contain 1.5 g/L sodium bicarbonate, 80%; fetal bovine serum, 20% **Temperature:** 37.0 C
Subculturing:	**Protocol:** Cultures can be maintained by the addition of fresh medium or replacement of medium. Alternatively, cultures can be established by centrifugation with subsequent resuspension at 1 X 10 exp5 viable cells/ml. Maintain cell density between 1 X 10 exp5 and 1 X 10 exp6 viable cells/ml. Do not allow cell concentration to exceed 1 X 10 exp6 cells/ml. **Medium Renewal:** Every 2 to 3 days
Freeze Medium:	Complete growth medium supplemented with 5% (v/v) DMSO
Related Products:	Recommended medium (without the additional supplements or serum described under ATCC Medium) - ATCC 30-2005 recommended serum - ATCC 30-2020 purified DNA - ATCC CCL-240D purified RNA - ATCC CCL-240R
References:	1050: Gallagher R , et al. Characterization of the continuous, differentiating myeloid cell line (HL-60) from a patient with acute promyelocytic leukemia. Blood 54: 713-733, 1979. PubMed: 288488 1229: Collins SJ , et al. Terminal differentiation of human promyelocytic leukemia cells induced by dimethyl sulfoxide and other polar compounds. Proc. Natl. Acad. Sci. USA 75: 2458-2462, 1978. PubMed: 276884 22902: Collins SJ , et al. Continuous growth and differentiation of human myeloid leukaemic cells in suspension culture. Nature 270: 347-349, 1977. PubMed: 271272 23403: Aggarwal BB , et al. Human tumor necrosis factor. Production, purification, and characterization. J. Biol. Chem. 260: 2345-2354, 1985. PubMed: 3871770 32237: Nahm MH , et al. Identification of cross-reactive antibodies with low opsonophogocytic activity for Streptoccus pneumoniae. J. Infect. Dis. 176: 698-703, 1997. PubMed: 9291318 32253: Berninghausen O , Leippe M . Necrosis versus apoptosis as the mechanism of target cell death induced by Entamoeba histolytica. Infect. Immun. 65: 3615-3621, 1997. PubMed: 9284127 32256: Aparicio CL , et al. Correction for label leakage in fluorimetric assays of cell adhesion. BioTechniques 23: 1056-1060, 1997. PubMed: 9421636 32277: Mansat V , et al. The protein kinase C activators phorbol esters and phosphatidylserine inhibit neutral aphingomyelinase activation, ceramide generation, and apoptosis triggered by daunorubicin. Cancer Res. 57: 5300-5304, 1997. PubMed: 9393753 32286: Cuthbert JA , Lipsky PE . Regulation of proliferation and Ras localization in

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